Current Status of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A microtome or ultramicrotome having a knife, a specimen arm movable relative to the knife, and the combination of at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system and at least one light source acting as an internal preparation illumination system;

wherein all said illumination systems illuminate a region around the preparation; all illumination systems encompass light-emitting diodes; and, ~~wherein said incident illumination system directs light toward a curved water surface for reflection toward a specimen to estimate the thickness of at least one specimen section~~

wherein one of the combination of at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system and at least one light source acting as an internal preparation illumination system is mounted on the microtome in such a way that a light beam proceeding from the base-mounted illumination system is reflected by a back side of the knife and at the preparation so as thereby to achieve uniform illumination of a gap between the knife and preparation.

2. (original) The microtome or ultramicrotome as defined in Claim 1, wherein the base-mounted illumination system encompasses at least one light-emitting diode and a frosted glass disk mounted in front of the light-emitting diode.

3. (cancelled)

4. (currently amended) The microtome or ultramicrotome as defined in Claim [3] 1, wherein the base-mounted illumination system has a first and a second light-emitting diode which are inclined with respect to one another at an angle (α), at least one of the light-emitting diodes coinciding respectively with a first or a second optical axis of an observation microscope.

5. (withdrawn) The microtome or ultramicrotome as defined in Claim 1, wherein the incident illumination system is formed of several light-emitting diodes.

6. (withdrawn)The microtome or ultramicrotome as defined in Claim 5, wherein the light-emitting diodes are arranged at an inclination in order to optimize brightness.

7. (withdrawn)The microtome or ultramicrotome as defined in Claim 5, wherein a frosted glass disk is provided between the light-emitting diodes and a water surface in a collection pan .

8. (withdrawn)The microtome or ultramicrotome as defined in Claim 7, wherein approximately hundred light-emitting diodes are arranged in planar fashion, and define an illumination direction that is directed toward the collection pan at the knife.

9. (withdrawn)The microtome or ultramicrotome as defined in Claim 1, wherein power is supplied to the light-emitting diodes via a battery.

10. (currently amended) A microtome or ultramicrotome having a knife, a specimen arm movable relative to the knife and the combination of at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system, and at least one light source acting as an internal preparation illumination system, wherein the base-mounted illumination system and the internal preparation illumination system encompass light-emitting diodes ~~and wherein said incident illumination system directs light toward a curved water surface for reflection toward a specimen to estimate the thickness of at least one specimen~~

~~section~~ and wherein one of the combination of at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system and at least one light source acting as an internal preparation illumination system is mounted on the microtome in such a way that a light beam proceeding from the base-mounted illumination system is reflected by a back side of the knife and at the preparation so as thereby to achieve uniform illumination of a gap between the knife and preparation.

11. (currently amended) A microtome or ultramicrotome having a knife, a specimen arm movable relative to the knife, and the combination of at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system, and at least one light source acting as an internal preparation illumination system, and wherein the base-mounted illumination system, the incident illumination system and the internal preparation illumination system encompass light-emitting diodes ~~and wherein said incident illumination system directs light toward a curved water surface for reflection toward a specimen to estimate the thickness of at least one specimen section~~ and wherein one of the combination of at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system and at least one light source acting as an internal preparation illumination system is mounted on the microtome in such a way that a light beam proceeding from the base-mounted illumination system is reflected by a back side of the knife and at the preparation so as thereby to achieve uniform illumination of a gap between the knife and preparation.